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AUTHOR Henry, Anne; Crawford, Caroline M.
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ABSTRACT

This paper discusses the use of graphic representations to develop a learner's conceptual framework. The benefits of the graphic representation of information throughout the learning experience are summarized. Examples are then presented from the instructional technology specialization area of the University of Houston-Clear Lake (Texas) School of Education, including a graphic representation of the department's philosophical orientation and representational models of the teacher-centered and student-centered models of instruction. (MES)

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Authors: Anne Henry

Instructional Technology Center

University of Houston – Clear Lake

United States of America

henry@cl.uh.edu

Caroline M. Crawford

Instructional Technology

University of Houston-Clear Lake

United States of America

crawford@cl.uh.edu

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Graphic Representations for Learning: Developing a Learner's Conceptual Framework

Abstract: The emphasis on knowledge attainment, higher order thinking skills and real-world learning opportunities within teacher education offers numerous opportunities for preservice teachers to develop a conceptual framework through which their future educational profession is viewed. The introduction of instructional technology into the educational environment offers the opportunity to represent such knowledge and understanding within a graphic format.

Introduction

The emphasis on knowledge attainment, higher order thinking skills and real-world learning opportunities within teacher education offers numerous opportunities for preservice teachers to develop a conceptual framework through which their future educational profession is viewed. The introduction of instructional technology into the educational environment offers the opportunity to represent such knowledge and understanding within a graphic format.

Graphic Representation of Information

Not only does the graphic representation of information through out the learning experience develop a visual framework for the preservice educator's understanding of the theories and concepts being presented, but the opportunity for preservice educators to graphically represent their own developing conceptual framework of understanding further encompasses a rich opportunity for reflection, discussion and possible revision of the graphic representation towards a fuller understanding of the personal, developing conceptual framework. Further, the preservice educators is developing an understanding of graphic representations within a learning environment, as well as offered the opportunity to view an instructional model that will be emulated within the PreK-12 instructional environment.

As an example of information developed into a graphic representation, the Instructional Technology specialization area of the University of Houston – Clear Lake's School of Education offers a philosophical orientation to all learners, so as to delineate the theoretical underpinnings of the specialization area. While a textual explanation is necessary, graphic representations of the textual information aid in the conceptual understanding and begin to develop a graphic realization and understanding of the reader's conceptual framework associated with the Instructional Technology specialization area. For example, following is a graphic representation of the Instructional Technology's philosophical orientation:

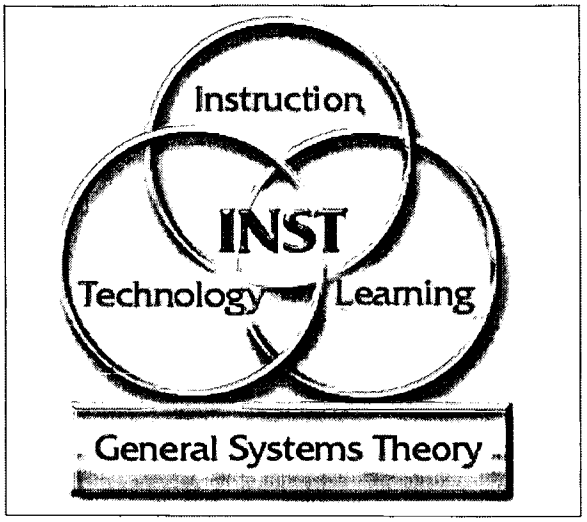

Figure 1: Instructional Technology Philosophical Orientation

Although this is an attractive graphic representation, which aids the user in realizing the main aspects of the information and how it fits together, the simplicity of the design respects the integrity of the information and the creation of a visual understanding; this understanding offers the user a conceptual framework through which to further integrate the philosophical orientation of the Instructional Technology specialization area.

Further, a second graphic that presents the Instructional Technology specialization area's philosophical orientation towards a student-centered model of instruction displays two representational models for the user's understanding: teacher-centered model of instruction, student-centered model of instruction. Through the representational modeling of the theoretical models of instruction, the user can create a thorough understanding of the Instructional Technology specialization area's focus upon the student-centered model of instruction that is apparent and modeled within the Instructional Technology courses offered.

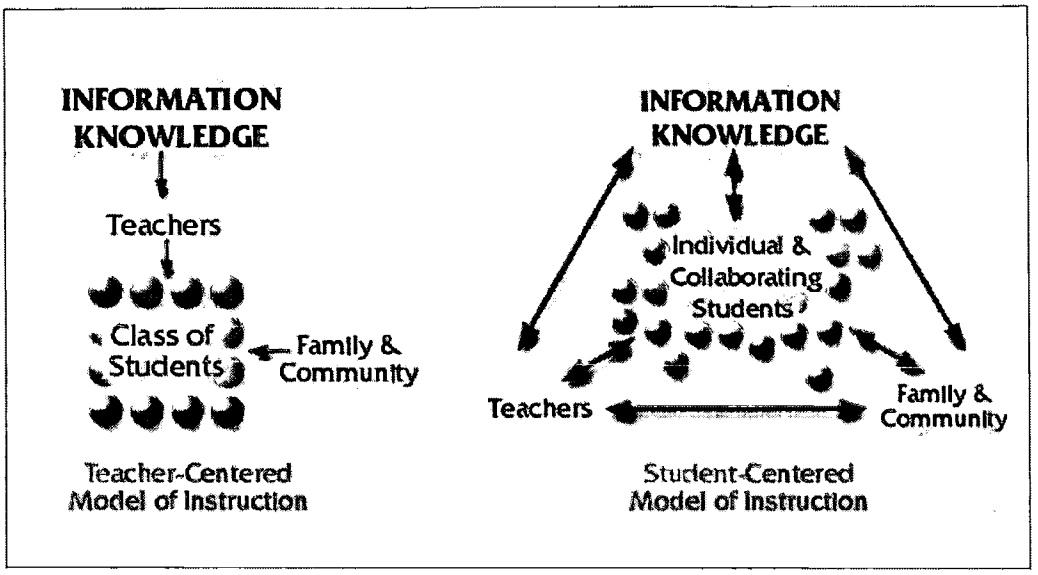

Figure 2: Teacher-Centered Versus Student-Centered Models of Instruction

The graphic representation of advanced theoretical viewpoints that are deemed important by faculty within the Instructional Technology specialization area aids the user in the creation of a conceptual framework of understanding through which the textual information can further delineate the knowledge obtained.

Conclusions

The opportunity to model the art of graphic representations of information within a learning environment aids the preservice teacher in the developmental process associated with realizing their own developing conceptual framework. Also, the preservice teacher observes the modeling of such a task, as well as the higher order thinking skills associated with this activity. The preservice teacher's understanding of their developing conceptual framework is imperative towards the professionalism associated with the field of education;

through the graphic representation of such information, the preservice teacher will integrate the technological aspects of their training within an instructional environment. The simplistic representation of integrated knowledge and understanding is both difficult and imperative towards the development of the preservice teacher's higher order thinking skills and professional future. Graphic representation of a learner's conceptual framework may appear simplistic, yet this powerful activity emphasizes the preservice teacher's understanding of the profession, as well as areas of strength and possible areas of further growth.

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Signature: Dr. Caroline M. Crawford	Printed Name/Position/Title: CAROLINE M. CRAWFORD, Assistant Professor
Organization/Address: University of Houston-Clear Lake 2700 Bay Area Blvd. Box 50 Houston, TX 77058-1098	Telephone: 281.283.3587 FAX: 281.283.3563 E-mail Address: CCrawford@cl.uh.edu Date: 01.31.02

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